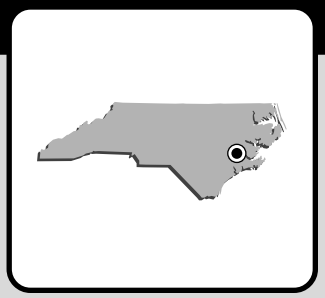
CHERRY POINT MARINE CORPS AIR STATION
CHERRY POINT, NORTH CAROLINA



Engineering Field Division/Activity: LANTDIV

Major Claimant: CMC

Size: 27,715 Acres

Funding to Date: $22,659,000

Estimated Funding to Complete: $145,196,000

Base Mission: Maintains and operates support facility and provides services and materials for Marine aircraft wing

Contaminants: PCBs, POLs, solvents

Number of Sites:		Relative Risk Ranking of Sites:			
CERCLA:	9	High:	46	Not Evaluated:	2
RCRA Corrective Action:	42	Medium:	3	Response Complete:	25
RCRA UST:	34	Low:	9	Total Sites:	85
Total Sites:	85				

NPL

EXECUTIVE SUMMARY

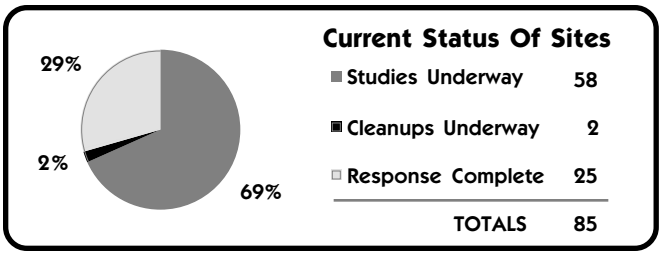
The Cherry Point Marine Corps Air Station (MCAS), commissioned in 1942, is located on the Neuse River in eastern North Carolina. It sits on a peninsula of land formed by Craven and Carteret Counties between the Neuse River to the north and Core and Bogue Sounds to the south. MCAS maintains and operates support facilities, services and material for a Marine Aircraft Wing; receives, stores, and issues ammunition and explosives for fleet contingency use; provides facilities for training and support of Fleet Marine Force Atlantic aviation units; is a primary aviation supply point; repairs and reworks various weapon systems; and operates an air-to-ground bombing target complex. Typical air station operations that contributed to contaminated sites on the facility include machine shops, foundry, coating and paint shops, paint stripping, plating shops, mechanical maintenance shops, public works shops, automotive shops, printing and photographic shops, power plants, wastewater treatment plants, fire fighting, landfill disposal, and storage of supplies, materials, fuels and limited ordnance. Current operations include pollution prevention technologies to prevent further contamination. The primary contaminants of concern at MCAS is the chemical additive PCB, the organic solvent TCE, petroleum hydrocarbons, and solvents. EPA Region IV completed a RCRA Facility Assessment (RFA). As a result of the RFA, the Commandant of the Marine Corps (CMC) and the EPA negotiated a Consent Order in December 1989. MCAS was placed on the National Priorities List (NPL) in FY95 due to the potential for contamination of the Castle Hayne Aquifer which is the primary drinking water source for the region. The MCAS will develop a Federal Facilities Agreement (FFA) with EPA Region IV and the State of North Carolina.

MCAS is within the drainage basin of the Neuse River and its tributaries, Slocum Creek and Hancock Creek. Although contamination migration is primarily by surface water into the creeks, there is potential for some migration into the shallow groundwater. Potable water is supplied from deep artesian aquifer wells. Water flow in the shallow unconfined aquifer generally follows land contours and discharges to surface streams. Areas of MCAS are located within designated wetlands, which support many species of migratory birds.

A Technical Review Committee (TRC) was formed in FY91 and meets once a year or as needed. The installation has established community Information Repositories at two locations. In FY95, the installation solicited community members to participate on the Restoration Advisory Board (RAB), an expansion of the TRC that includes a broad cross-section of community representatives. The installation expanded its public involvement program, completed a Community Relations Plan (CRP), and implemented a plan to proactively inform and involve the community in the cleanup process.

Currently, 58 sites are in a study phase. Of the 26 RCRA Corrective Action (CA) sites in the study phase, six are undergoing Corrective Measures Studies (CMS). Of the 32 RCRA Underground Storage Tank (UST) sites in the study phase, one Initial Site Characterization (ISC) is underway and one Investigation (INV) is ongoing. Sixteen RCRA UST sites have Corrective Action Plans (CAPs) are underway and two RCRA UST sites are in the design phase. The remaining 32 sites under study are awaiting funding to complete the study phase. Sites 5 and 17 were remediated under RCRA CA by removal and disposal of PCB contaminated soils. Twenty-five sites are Response Complete (RC).

A major success in the cleanup program at MCAS Cherry Point has been their ability to implement a formal partnering process between the installation, EPA Region IV, and the state of North Carolina. This partnering has resulted in reduced review times, and a streamlined Site Management Plan, eliminating the need for Remedial Investigation/ Feasibility Study (RI/FS) work plans at some sites. The installation has been able to accelerate cleanup by the elimination of pre-Draft and Draft Final documents, elimination of formal work plans and the use of time-critical removal actions and interim Records of Decision (RODs).



CHERRY POINT MCAS
RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - MCAS lies on level to slightly sloping land. The installation is within the drainage basin of the Neuse River and its tributaries, Slocum Creek and Hancock Creek. Drainage on MCAS is directed toward these three bodies of water via a system of ditches, storm sewers, and pre-existing local tributaries. The Neuse River flows east past MCAS into Pamlico Sound, which empties into the Atlantic Ocean through a number of inlets in the barrier island chain. Although as many as eight aquifer zones have been identified in Craven County, only the water table aquifer and the first confined limestone aquifer are important to MCAS. Flow in the water table aquifer is directed toward the Neuse River and Hancock and Slocum Creeks. Contaminant migration at MCAS would tend to be toward surface waters to the east, north and west of the installation. Main pathways are overland flow and movement within the surficial aquifer. Twenty-three operating wells provide drinking water to the Air Station. The active wells take water from the lower artesian aquifer, the Castle Hayne.

NATURAL RESOURCES - MCAS is in the coastal plain area of North Carolina. The uplands consist generally of pine flatwoods along with various habitats which support species of hardwoods. Extensive wildlife habitat is provided by the forest resource. A forestry management plan has been adopted at the station. Wetland areas at MCAS consist of the regions associated with three ponds on the station and stream habitats. Both Slocum and Hancock Creeks support wetland communities. Slocum Creek, Hancock Creek, and the Neuse River serve as recreational resources for military personnel and local residents. Many species of migrating birds pass through the region. Local species of shore birds also employ marsh areas as nurseries. The only federally listed endangered or threatened species in the area is the American alligator and occasional transitory migrants. In addition, there are three State listed threatened or endangered species on MCAS property.

RISK - A Baseline Risk Assessment, both ecological and human health is currently ongoing following the EPA guidance. For the Department of Defense (DOD) Relative Risk Ranking System, 83 sites have been ranked. Of the 85 sites, 46 sites were ranked as "high" primarily due to known groundwater contamination. The Agency for Toxic Substance and Disease Register (ATSDR) performed a public health assessment for the installation in 1995. The results will be forthcoming in 1996.

REGULATORY ISSUES

NATIONAL PRIORITIES LIST - MCAS was placed on the National Priorities List (NPL) on 16 October 1994 with a Hazard Ranking System (HRS) score of 70.71. The main problem is gross groundwater contamination with the organic solvent TCE in the surficial aquifer passing through to Castle Hayne drinking water aquifer. One contributor to groundwater contamination is leakage from the Industrial Wastewater collection system. The MCAS has repaired the leakage.

LEGAL AGREEMENTS - The MCAS will develop a Federal Facilities Agreement (FFA) with EPA Region IV and the State of North Carolina.

PARTNERING - In July 1994, MCAS, Naval Facilities Engineering Command (NAVFAC), Atlantic Division (LANTDIV), EPA Region IV and the State of North Carolina began facilitated partnering. The partnering stakeholders are organized into tiers with managers and executives on Tier 2 and Remedial Project Managers on Tier 1. By December 1994, the Site Management Plan was streamlined and a year's preparation time and the cost of Remedial Investigation/Feasibility Study (RI/FS) Work Plans for four different Operable Units (OUs) were eliminated in a process change developed by the team.

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - A Technical Review Committee (TRC) was formed in FY91 and meets once a year or as needed. In addition to the TRC, MCAS has established a Restoration Advisory Board (RAB) that is scheduled to meet during the spring of FY96.

COMMUNITY RELATIONS PLAN - A Community Relations Plan (CRP) was published in November 1994.

INFORMATION REPOSITORY - Two Information Repositories were established in FY93. One is located at the Havelock Public Library and the other at the Station Library. These repositories contain a copy of the Administration Record (the official file) and are updated regularly by the Marine Corps.

CHERRY POINT MCAS
HISTORICAL PROGRESS

FY83

Sites 1-32 - An Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA), completed in March 1983, identified 32 potentially contaminated sites at MCAS. No Further Action (NFA) was planned for 14 sites (Sites 11, 13, 14, 18, 22-28 and 30-32) since the sites were found not to pose a threat to human health or environment.

FY88

Sites 8 and 9 - As a result of a RCRA Facility Assessment (RFA), these sites were transferred to the UST program.
Sites 1-7, 10-21, 29 and 32 - As a result of an RFA, these sites will be addressed under RCRA CA. NFA is required at Sites 22-28, 30 and 31.
Sites 33-52 - Twenty new SWMUs were identified in the RFA.

FY89

Site 29 - An Interim Remedial Action (IRA) was initiated to remove free floating petroleum product from the groundwater. The IRA is expected to be completed in FY97.

FY90

Site 29 - Corrective Measures Study (CMS) began.
Site 55 - An additional SWMU was added when leakage was found during the replacement of an underground tank. During the tank replacement, the contaminated soil was removed.

FY91

USTs 2-5, 19 and 23 - Initial Site Characterizations (ISCs) completed. Groundwater contamination was confirmed at all USTs.

FY92

Site 55 - Completed a RCRA Facility Investigation (RFI), which indicated contamination with the organic compounds chloromethane and chloroform. Assessment showed a low risk.
USTs 3-5 - Twenty tanks were removed.
USTs 6-10 and 22 - ISCs were completed. Groundwater contamination was confirmed at all USTs.

FY93

Sites 5 and 17 - An RFI was completed in December 1992. The RFI confirmed PCB contamination in the soil and both sites were recommended for a CMS. The CMS was also completed in FY93 for Site 5. As a result, a Remedial Action Contract (RAC) is being used for the DES and CMI.
Sites 1-4, 6, 7, 12, 15, 19, 21, 33-42, 45, 47 and 49-52 - RFIs were completed in June 1993. Four SWMUs (33-35 and 50) were found not to require further action and 22 Sites required a CMS.
USTs 1, 16, 19, 20, 23 and 28 - Thirty-nine tanks were removed.
USTs 11, 12, 14, 15 and 21 - ISCs were completed. Groundwater contamination was confirmed at all USTs except UST 21.
USTs 2 and 22 - CAPs were completed.

FY94

Site 41 - Site was transferred to the UST program for remediation.
Sites 36, 37 and 49 - CMIs to remove contaminated soil were completed.
USTs 1, 5, 7, 8, 10-12, 20, 21, 24 and 26-29 - Fifty-eight tanks were removed.
UST 3 - Contaminated soil was removed.
USTs 1, 16, 18, 20 and 28 - ISCs were completed. Groundwater contamination was confirmed at all USTs except UST 20.
USTs 3, 15 and 19 - Long Term Monitoring (LTM) was initiated and is expected to continue for two years.
UST 3 - CAP was completed.
UST 24 - INV was completed.

PROGRESS DURING FISCAL YEAR 1995

FY95

All Sites - A Baseline Risk Assessment is ongoing at all sites. A hydrogeological framework study was completed to establish areas of vulnerability of the Castle Hayne drinking water aquifer from contaminants at the Air Station. Continued partnering activities and concurrent document reviews.
Sites 6, 7, 10, 44 and 46 - Began CMS for these sites.
Site 16 - Time critical removal action was conducted to protect the public form physical and chemical hazards.
Sites 5 and 17 - The Design (DES) was finalized. The CMI, which is also completed, consisted of the removal and landfilling of the contaminated soil at a Toxic Substances Control Act (TSCA) approved landfill.
Site 17 - CMS are completed.
USTs 25-27 - ISCs were completed.
UST 27 - CAP was completed.

PLANS FOR FISCAL YEARS 1996 AND 1997

FY96

Sites 6, 7, 10 and 44 - CMSs and DESs are expected to be completed.
Site 6 - CMI is expected to be completed.
Site 29 - CMS is expected to be completed.
Sites 15, 16, 40, 42, 47, 51 and 52 - Groundwater RI/FS Proposed Remedial Action Plan (PRAP) and ROD to be completed..
Sites 10, 44 and 46 - Final RI/FS PRAP and ROD to be completed.
USTs 5, 12, 17, 21, 23 and 35 - CAPS are expected to be completed.
USTs 1, 2, 5-10, 13, 14, 16, 18, 21-23, 29 and 34 - DESs are expected to be completed.

FY97

Sites 4 - CMSs are expected to be completed. Final RI/FS PRAP and ROD to be completed.
Sites 7 and 10 - CMIs are expected to be completed.
Sites 15-17, 40, 42, 47, 51 and 52 - IRAs are expected to be completed.
Site 21 - Final RI/FS PRAP and ROD to be completed.
Site 29 - DESs and CMIs are expected to be completed. The IRA initiated in FY89 to remove free floating product from the groundwater is expected to be completed.
Sites 36, 37 and 41 - CMDs are expected to be completed.
USTs 20 and 30 - CAPs are expected to be completed.
USTs 5, 7 and 10 - Free product removal is expected to be completed.
USTs 4, 17, 20, 28, 30, 32, 33 and 35 - DESs are expected to be completed.
USTs 1, 2 and 10 - Implementation of the corrective measures are expected to be completed.

CHERRY POINT MCAS
PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	9							
SI								
RI/FS								
RD								
RA								
IRA								
RC	9							
Cumulative Response Complete	100%							

RCRA CA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
RFA	42							
RFI	29							1
CMS	1	1	6	1	7			11
DES		2	4	1	1	3		11
CMI	3	2	1	3		1	2	13
IRA	4(5)			9(9)				
RC	14		1	1		4		22
Cumulative Response Complete	33%		36%	38%		48%		100%

UST	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
ISC	23	3	1					
INV	1		1					
CAP	3	1	23	2	1			
DES			17	8				
IMP				3	9	8	3	5
IRA	1(1)	1(1)	1(1)	3(3)	1(1)			
RC	1	1	4		1		1	26
Cumulative Response Complete	3%	6%	18%		21%		24%	100%